

Mission to an Asteroid

Who: Scientists at the Johns Hopkins University Applied Physics Laboratory (APL), Laurel, Md.

What: APL designed and built a spacecraft called Near Earth Asteroid Rendezvous (NEAR) Shoemaker. The spacecraft was sent into orbit around an asteroid called 433 Eros.

When: The spacecraft was launched Feb. 17, 1996, from Cape Canaveral, Fla. It went into orbit around Eros on Feb. 14, 2000. At the end of the mission, it landed on Eros on Feb. 12, 2001.

Why: The mission was to study what asteroid Eros is made of and to learn more about the many asteroids, comets and meteors that come close to Earth. Scientists also hope to learn more about how the planets were formed.

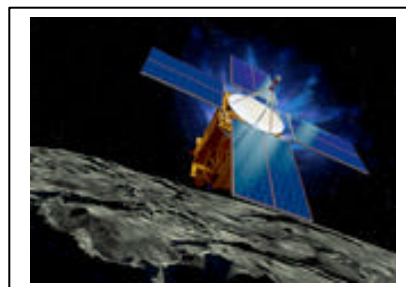
Additional facts:

NEAR Shoemaker is the first spacecraft ever to orbit an asteroid and the first to land on one. NEAR was the first mission in NASA's Discovery Program to study the planets and other objects in the solar system.

Asteroids are small bodies without atmospheres that orbit the sun but are too small to be called planets.

Asteroid 433 Eros is the shape of a potato and measures 8 by 8 by 21 miles. Its gravity is so weak that a 100-pound person would weigh only 1 ounce. If you threw a baseball faster than 22 miles per hour from its surface, the ball would escape into space and never come down.

During its 5-year mission, the NEAR Shoemaker spacecraft traveled 2 billion miles and took 160,000 pictures of Eros.



NEAR Shoemaker spacecraft orbits asteroid 433 Eros.

Statements:

Statement by Bob Farquhar, NEAR Mission Director:

"This mission could not have worked out better."

Statement by Andy Cheng, NEAR Project Scientist:

"Eros is probably older than Earth."

Research Web Sites:

APL's NEAR home page:

<http://near.jhuapl.edu/>

NASA Discovery Program:

<http://discovery.nasa.gov/>

Asteroid facts:

<http://seds.lpl.arizona.edu/nineplanets/nineplanets/asteroids.html>

Natural Gas Cars

Who: Engineers

Where: The Johns Hopkins University Applied Physics Laboratory (APL) in Laurel, Md.

What: Designed and built three cars that run on natural gas instead of gasoline.

Why: Cars that don't use gasoline have very low exhaust emissions and so are better for the environment and people.

Additional facts:

Emissions from gasoline cars pollute the air and make it unhealthy.

Cars that run on natural gas produce about one-fifth the exhaust emissions of gasoline cars. They pollute the atmosphere much less and are healthier for people.

Natural gas cars don't depend on oil from foreign countries. It is estimated that America has a 200-year supply of natural gas. Until now, America hasn't made many natural gas cars. The gas tanks took up so much room there was very little trunk space. But the APL natural gas cars have a new type of storage tank that takes up less room so the cars have the same trunk space as a gasoline car.

Up to now, most natural gas cars could only go about 150 miles before refueling, and there were very few natural gas filling stations. But APL's cars can go 300 miles on a full tank, and every day there are more natural gas filling stations.

Natural gas costs less. If a fill-up with gasoline costs \$20, natural gas would be about \$12.50.

At APL, the three natural gas cars are used for company business. Drivers say they look the same and drive the same as gasoline cars.



Driver fills up car at APL's natural gas filling station.

Statements:

Statement by John Wozniak, Natural Gas Car Project Leader:

"Natural gas cars will make America a healthier, safer place to live."

Statement by Connie Finney, an APL worker:

"When I drive one of our natural gas cars, I feel like I'm helping the environment."

Research Web Sites:

APL's natural gas project

<http://www.jhuapl.edu/programs/trans/fuels.htm>

Natural gas vehicle information

<http://www.ngv.org/>

Facts on natural gas vehicles

<http://www.iangv.org/sources/qa.html>

Space Science Camp

Who: Middle school students from all over Maryland.

What: Participate in a Space Science Camp, sponsored by the Maryland Summer Center for Space Science.

Where: Johns Hopkins University Applied Physics Laboratory (APL), Laurel, Md.

When: Two weeks during the summer.

Why: Help students learn about space technology and science.

Science Camper Activities:

Launched a plastic soda bottle rocket.

Planned and designed a space mission, including building a scale model of the spacecraft, complete with instruments.

Created mission logos, posters explaining the mission, and budgets for the mission.

Gave talks explaining their missions to other students.

Created a space travel brochure.

Studied the dangers of asteroid impacts by creating and studying small impact craters.

Made a Star Finder.

Took a field trip to the National Air and Space Museum in Washington, D.C.

Kept a journal of their experiences at camp.



Statements:

Statement by Lou Ann Robbins, 13:

"Our team planned a mission to Mars. We figured it would take seven months and \$50 billion to get there."

Statement by Connie Finney, APL Space Camp Coordinator:

"The kids learned by doing instead of just reading about it. We hope some of the students will think about a career in space."

Research Web Sites:

APL Video "Careers in Space": <http://sd-www.jhuapl.edu/CareersInSpace/video/video.html>

Start Recycling!

Purpose of your article: Convince students to begin recycling programs in their schools.

Who: Elementary school students.

What: Begin recycling projects in your school.

How: Form teams in your class to come up with recycling projects.

Why recycling is important:

Saves natural resources: By making products from recycled materials instead of new materials, we save trees and reduce the need to dig for minerals.

Saves energy: It takes less energy to make products from recycled materials than from new materials.

Saves clean air and water: Making containers and products from recycled materials reduces acid rain, air pollution and global warming.

Saves landfill space: When recycled materials go into new products, they don't go into landfills, so landfill space is saved. Also, it reduces fees that companies have to pay to dump trash in the landfill.

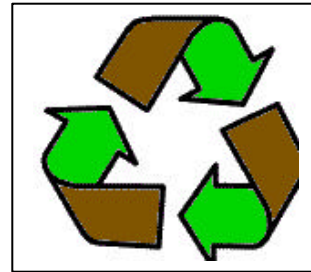
Saves money and creates jobs: Recycling is often the cheapest way for cities to get rid of their waste. And the recycling process creates far more jobs than operating landfills or incinerators.

Research Web Sites:

America Recycles Day: <http://www.americarecyclesday.org/>

Recycling guides: <http://www.obviously.com/recycle>

School recycling programs in King County, Washington:
<http://dnr.metroke.gov/swd/schoolpr/schoolpr.htm>



Suggested school recycling projects:

1. Make and decorate recycling bins for your school. Have a contest for the coolest bin!
2. Create posters, newsletters and skits to teach others about recycling.
3. Start buying more reusable items e classroom — and for yourself!
4. Have a waste-free lunch day. Bring your food in reusable containers instead of throw-away bags, paper and plastic.

Statements:

Statement by recycling expert Buckley "Buck" Knox:

"When you recycle, you make the air cleaner and the water fresher for everyone on the planet."

Pick Your Own Story

There are hundreds of stories all around you. Every person, every school, every community has a story to tell. Just keep **Who, What, Where, When** and **Why** in mind as you start off with a great lead, tell the story – maybe throwing in a quote or two – and finish off with an eye-catching headline. To make a REALLY great story, use a photo or a graphic.

To start you thinking, here are some of the stories recently turned in by 4th grade students for their newspaper:

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| All About Jupiter | Be Smart! Don't Start Smoking |
| Is Pluto Really a Planet? | The Rings Around Planets |
| Will the Yankees Win the World Series? | Construction in Our Community |
| My Dog Mia | Help Save Asthma Sufferers |
| Cherry Tree Farms Construction | Motocross Action |
| The Best Grandmother | Scooter Safety |
| People Like Ice-skating | Horseback Riding Dangers |
| The Funniest Teacher in School | The Blizzard in Buffalo |
| What is a Twin? | The Secrets of Soccer |
| What It's Like to Be in Middle School | Don't Do Drugs |
| Sounds of Wind Instruments | A New Teacher |
| Dangerous Reptiles | Kids' Right to Vote |
| Harry Potter | From a Kid to a Redskin |
| Do Kids Have Too Much Homework? | A Hero in Our Midst |
| Nintendo's Next Game | My Soccer Team |
| The Best Book Fair | Halloween Safety Rules |
| The Life of John P. Jubinski | Elementary School Beginner's |
| Band | |
| My New Baby Sister | A Motorized Tricycle |
| Online Safety | Homemade Costumes |
| Kids for President | Taking a Look at Space |
| No Fingerboards in School | Homeless (A True Story) |
| What It's Like to Be a High Schooler | Being the Oldest |
| What's Your Favorite Sport? | Why is P.E. a Popular Subject? |
| The Annual Turkey Trot | Mia Hamm: A Great Soccer Player |
| Where is Celion Dion Now? | What Boys and Girls Like to |
| Wear | |
| Chorus Concert | Going for the Gold |
| Alyssa's Favorite P.E. Game | Fourth Grade Writers |
| The Vice Principal Talks about School | Mr. Lea, Band Teacher |
| Engineer Club Builds Rides Based on Books | Chorus: On the Road Again |
| Are Feeder School Systems a Good Idea? | The Bulls' Upcoming Season |

Give you an idea? Cool. Let's write a newspaper story!